Amendments To The Claims

The listing of claims replaces all prior versions and listings of claims. Only those claims being amended herein show their changes in highlighted form, where insertions appear as underlined text (e.g., insertions) while deletions appear as strikethrough text (e.g., ~~deletions~~).

1. (Original) A method of determining whether a signal is reliable enough for use in a determination of a physiological characteristic of pulsing blood, the method comprising:

receiving a plurality of intensity signals from light-sensitive detector which detects light of a plurality of wavelengths transmitted through body tissue carrying pulsing blood;

determining an indication of correlation between at least two of the plurality of intensity signals; and

based on the indication of correlation, determining whether to include one or more of the plurality of intensity signals in a determination of a physiological characteristic of pulsing blood.

2. (Original) The method of claim 1, further comprising indicating when the indication of correlation is below a threshold.

3. (Original) The method of claim 2, wherein the threshold comprises about 0.75.

4. (Original) The method of claim 2, wherein the indicating comprises disqualifying the at least two intensity signals.

5. (Original) The method of claim 2, wherein the indicating comprises generating an indication that the light-sensitive detector is defective.

6. (Original) The method of claim 2, wherein the indicating comprises generating an indication that the light-sensitive detector is malfunctioning.

7. (Original) The method of claim 2, wherein the indicating comprises generating an indication that the at least two intensity signals do not satisfy an expected signal model.

8. (Original) The method of claim 2, wherein the indicating comprises generating an audio warning.

9. (Original) The method of claim 2, wherein the indicating comprises generating a visual warning.

10. (Original) The method of claim 2, wherein at least some of the plurality of intensity signals include motion induced noise.

11. (Original) The method of claim 10, further comprising indicating when the indication of correlation is below a threshold.

12. (Original) The method of claim 11, wherein the threshold comprises about 0.75.

13. (Original) The method of claim 11, wherein the indicating comprises disqualifying the at least two intensity signals.

14. (Original) The method of claim 11, wherein the indicating comprises at least one of generating an indication that the light-sensitive detector is defective and generating an indication that the light-sensitive detector is malfunctioning.

15. (Original) The method of claim 11, wherein the indicating comprises at least one of generating an indication that the at least two intensity signals do not satisfy an expected signal model, generating an audio warning, and generating a visual warning.

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16. (Original) In a system that calculates a physiological characteristic, a method of determining a measure of confidence that one or more intensity signals will result in an accurate determination of a physiological characteristic of pulsing blood, the method comprising:

receiving a plurality of intensity signals from light-sensitive detector which detects light of a plurality of wavelengths attenuated by body tissue carrying pulsing blood;

determining an indication of correlation between at least two of the plurality of intensity signals; and

based on the indication of correlation, conducting an evaluation of whether one or more intensity signals will result in an accurate determination of a physiological characteristic.

17. (Original) The method of claim 16, further comprising: providing at least first and second calculation techniques, wherein each calculation technique is capable of generating at least one value representative of the physiological characteristic; and based on the evaluation, utilizing at least one of the first and second calculation techniques to determine a resulting value indicative of the physiological characteristic.

18. (Original) The method of claim 16, wherein the determining an indication of correlation further comprises determining a plurality of indications of correlation.

19. (Original) The method of claim 16, further comprising determining a malfunction of the system based on the evaluation.

20. (Original) The method of claim 19, wherein the malfunction corresponds to the light-sensitive detector.

21. (Original) The method of claim 16, further comprising determining the system is malfunctioning based on the evaluation.

22. (Original) The method of claim 16, further comprising determining whether one of the plurality of intensity signals satisfies a signal model based on the evaluation.

23. (Original) The method of claim 16, further comprising indicating when the indication of correlation is below a threshold.

24. (Original) The method of claim 23, wherein the threshold comprises about 0.75.

25. (Original) The method of claim 16, wherein at least some of the plurality of intensity signals include motion induced noise.

26. (Original) A method of determining oxygen saturation of pulsing blood, the method comprising:

receiving a plurality of signals from a light-sensitive detector which detects light of at least first and second wavelengths attenuated by body tissue carrying pulsing blood;

determining representative values of oxygen saturation based on the plurality of intensity signals; and

averaging the representative values over time to determine a resulting value of the oxygen saturation of the pulsing blood, wherein the averaging is varied depending upon a level of motion noise in at least one of the plurality of intensity signals.

27. (Original) A patient monitor capable of determining one or more physiological characteristics of pulsing blood using intensity signals from an optical probe, the patient monitor comprising:

at least one conductive element which receives a plurality of intensity signals from light-sensitive detector which detects light of a plurality of wavelengths attenuated by body tissue carrying pulsing blood; and

a processor which determines an indication of correlation between at least two of the plurality of intensity signals and, based on the indication of correlation, determines whether to include one or more of the plurality of intensity signals in a determination of a physiological characteristic of pulsing blood.

28. (Original) The patient monitor of claim 27, wherein the processor also indicates when the indication of correlation is below a threshold.

29. (Original) The patient monitor of claim 28, wherein the threshold comprises about 0.75.

30. (Original) The patient monitor of claim 28, wherein the processor disqualifies the at least two intensity signals when the indication of correlation is below the threshold.

31. (Original) The patient monitor of claim 28, wherein the processor generates an indication that the light-sensitive detector is defective when the indication of correlation is below the threshold.

32. (Original) The patient monitor of claim 28, wherein the processor generates an indication that the light-sensitive detector is malfunctioning when the indication of correlation is below the threshold.

33. (Original) The patient monitor of claim 28, wherein the processor generates an indication that the at least two intensity signals do not satisfy an expected signal model when the indication of correlation is below the threshold.

34. (Original) The patient monitor of claim 28, wherein the processor generates an audio warning when the indication of correlation is below the threshold.

35. (Original) The patient monitor of claim 28, wherein the processor generates a visual warning when the indication of correlation is below the threshold.

36. (Original) The patient monitor of claim 28, wherein at least some of the plurality of intensity signals include motion induced noise.

37. (Original) The patient monitor of claim 36, wherein the processor also indicates when the indication of correlation is below a threshold.

38. (Original) The patient monitor of claim 37, wherein the threshold comprises about 0.75.

39. (Original) The patient monitor of claim 37, wherein the processor disqualifies the at least two intensity signals when the indication of correlation is below the threshold.

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40. (Original) The patient monitor of claim 37, wherein the processor generates at least one of an indication that the light-sensitive detector is defective and an indication that the light-sensitive detector is malfunctioning when the indication of correlation is below the threshold.

41. (Original) The patient monitor of claim 37, wherein the processor generates at least one of an indication that the at least two intensity signals do not satisfy an expected signal model, an audio warning, and a visual warning when the indication of correlation is below the threshold.

42. (New) A method of assessing the reliability of a physiological signal for use in a determination of a physiological characteristic of pulsing blood, the method comprising:

receiving a plurality of intensity signals from light-sensitive detector which detects light of at least two wavelengths transmitted through body tissue carrying pulsing blood;

determining an indication of correlation between the intensity signals for the at least two wavelengths; and

based on the indication of correlation, determining the reliability of the intensity signals for use in a determination of a physiological characteristic of pulsing blood.

43. (New) The method of Claim 42, wherein the indicating comprises disqualifying one or more of the intensity signals of the at least two wavelengths when the reliability is too low.

44. (New) The method of Claim 42, wherein the indicating comprises generating an indication that the intensity signals of the at least two wavelengths do not satisfy an expected signal model.

45. (New) The method of Claim 42, wherein the indicating comprises generating an audio and/or visual warning.

46. (New) The method of Claim 42, wherein at least some of the plurality of intensity signals include motion induced noise.

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